

REMARKS

Pursuant to the requirement to elect a single invention for further prosecution in the present application, as contained in the Office Action mailed April 3, 2006, Applicants hereby elect invention I, drawn to a Braille pin holding and display apparatus. It is noted that original claims 1-57 have been cancelled and replaced with new claims 58-114. All of the new claims 58-114 are directed to the elected invention.

Thus, by this amendment, claims 1-57 have been cancelled and replaced with new claims 58-114. Examination on the merits of claims 58-114 is now respectfully requested.

These new claims 58-114 have been presented in order to expedite allowance of this application.

More specifically, the claims have been amended to restrict the scope of the present invention to place the claims clearly in condition for allowance, and clarify the present invention over Japanese Laid-open Patent Publication 2000-122526, which is the only reference cited in the corresponding European patent application, and is a reference already described in the original specification of the present application.

More specifically, claim 58 has been drafted to distinguish over Japanese Laid-open Patent Publication 2000-122526.

As compared with Japanese Laid-open Patent Publication 2000-122526, the present invention seeks to provide a structure for retaining the tactile pins in a desired position, the structure being relatively simple (enabling small size, light weight and low cost).

As compared with Japanese Laid-open Patent Publication 2000-122526, the present invention includes the features that:

(a) the number of elastic members for pressing against the sides of the tactile pins to hold the tactile pins is smaller than the number of tactile pins (i.e. the "second number" of the elastic elements is smaller than the "first number" of the tactile pins); and

(b) each elastic member presses simultaneously against a plurality of the tactile pins (i.e. against the plurality of tactile pins in the group associated with the elastic member).

Thus, a single elastic member is used to press against more than one tactile pin, which enables a reduction in the number of elastic members that need to be used. This enables a reduction in the number of parts to assemble the apparatus, reduction in weight of the apparatus, and easy assembly during manufacture. Moreover, such elastic contact enables better control over the force applied by the elastic member to the tactile pin, and makes it easier to weaken the necessary force for holding the pin, and thus easier to switch between holding and releasing.

The above features are not disclosed, or suggested in Japanese Laid-open Patent Publication 2000-122526.

In contrast, in Japanese Laid-open Patent Publication 2000-122526, the number of elastic members (15A) for holding the tactile pins is the same as the number of tactile pins. Each tactile pin is provided with its own individual, respective elastic member (15A) for holding the pin. According to Japanese Laid-open Patent Publication 2000-122526, a metal (steel) plate is first prepared. The metal plate is subjected to a machining operation such that one through-hole is provided for each tactile pin to be inserted therein and be slidable up and down therein. Three metal segments (15A) are bent from the periphery of each through-hole, so that the three segments act as a member for frictionally holding the pin by a three-point friction support.

The technical disadvantages of Japanese Laid-open Patent Publication 2000-122526 are that: (1) it is not easy to machine each through-hole to produce the integral metal segments; (2) variations of the holding forces among the three-point supports each by three metal segments cannot be avoided due to, e.g., machining errors; (3) due to thermal expansion or thermal shrinkage of the metal plate, significant variations of the positions and other parameters of the through-holes and the three metal segments occur, which are impossible to avoid; (4) although we have referred to the metal segments as "elastic", in fact, the amount of elasticity is very small (almost non-existent) and is extremely difficult to control.


Therefore, as compared with Japanese Laid-open Patent Publication 2000-122526, claim 58 defines a clear structural difference, which contributes to the achievement of significant technical advantages over Japanese Laid-open Patent Publication 2000-122526.

For the above reasons, it is submitted that claim 58, as well as claims 59-114 which depend therefrom, are clearly allowable over the prior art of record, and an early notice thereof is earnestly solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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